OIPE JC17
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FIG. 1

Set (Information)		a(001)	b(010)	c(011)	d(100)	e(101)	f(110)	g(111)
Received signal patterns	Transmission word	001110	010101	011011	100011	101101	110110	111000
	Error patterns	101110	110101	111011	000011	001101	010110	011000
		011110	000101	001011	110011	111101	100110	101000
		000110	011101	010011	101011	100101	111110	110000
		001010	010001	011111	100111	101001	110010	111100
		001100	010111	011001	100001	101111	110100	111010
		001111	010100	011010	100010	101100	110111	111001
		101010	110001	111111	000111	001001	010010	011100

FIG. 2

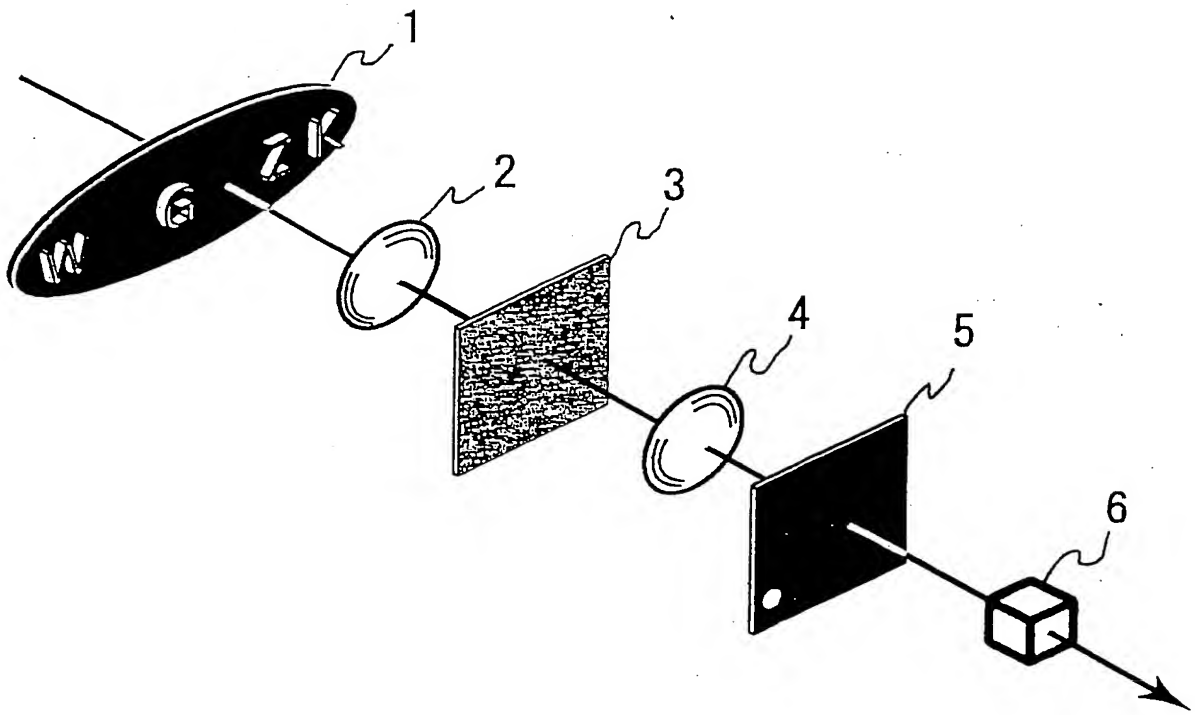

FIG. 3

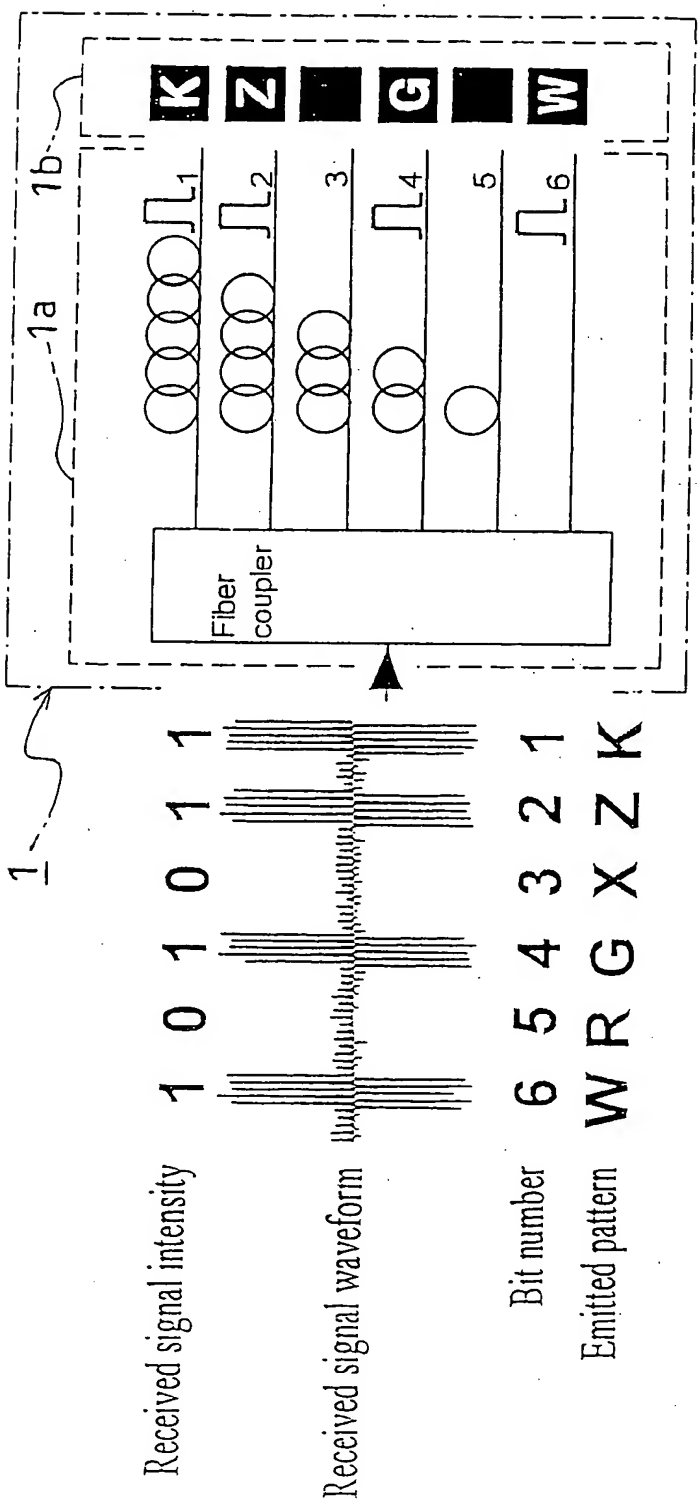
K
N
G
W
1b
1a
L1
L2
3
L4
5
L6
Fiber coupler
1
Received signal intensity
1 0 1 0 1 1
Received signal waveform
Bit number
6 5 4 3 2 1
Emitted pattern
W R G X Z K

FIG. 4

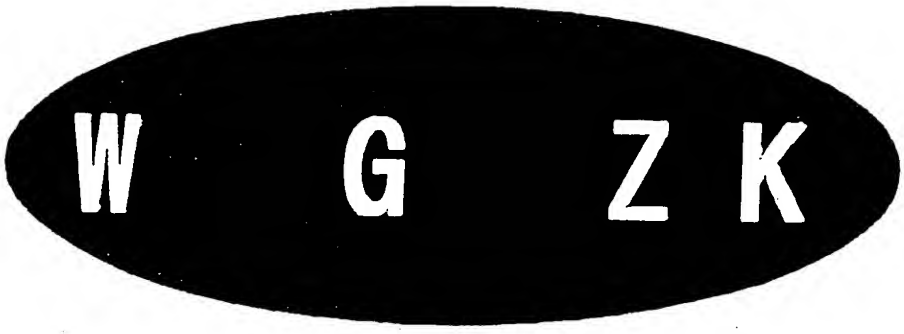
W G Z K

FIG. 5

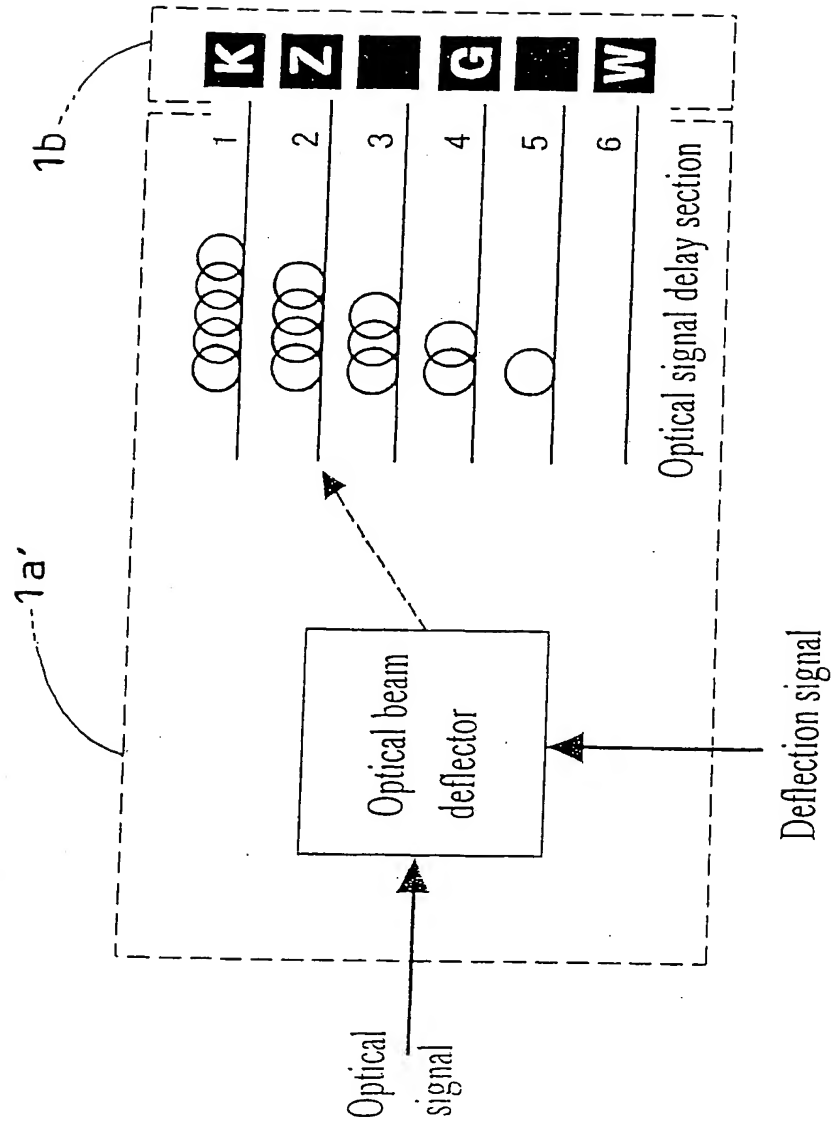
K
Z
G
W
1
2
3
4
5
6
1b
1a'
Optical signal delay section
Optical beam deflector
Deflection signal
Optical signal

FIG. 6

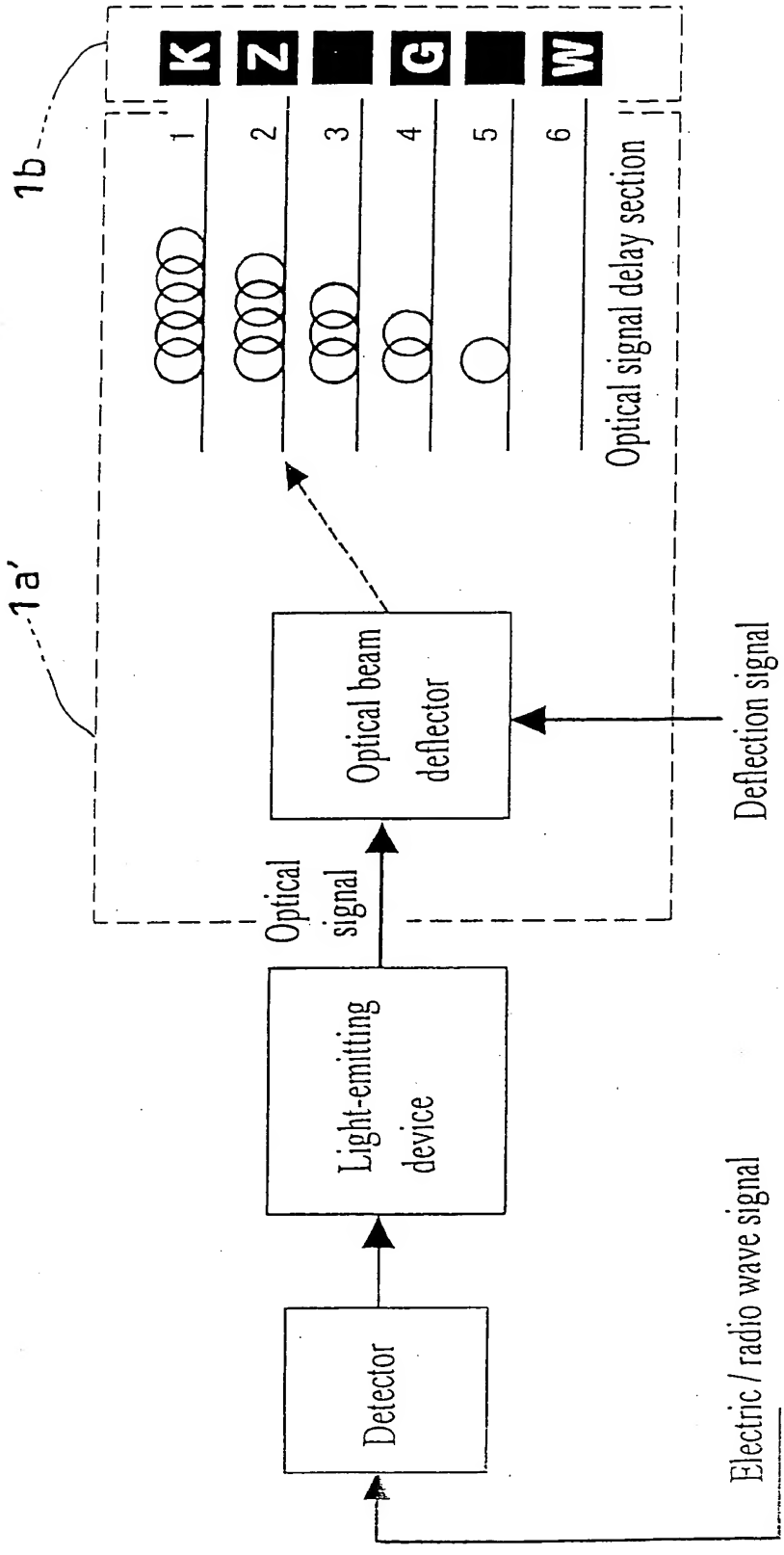
K
Z
G
W
1
2
3
4
5
6
1b
1a'
Optical signal delay section
Optical beam deflector
Deflection signal
Optical signal
Light-emitting device
Detector
Electric / radio wave signal

FIG. 7

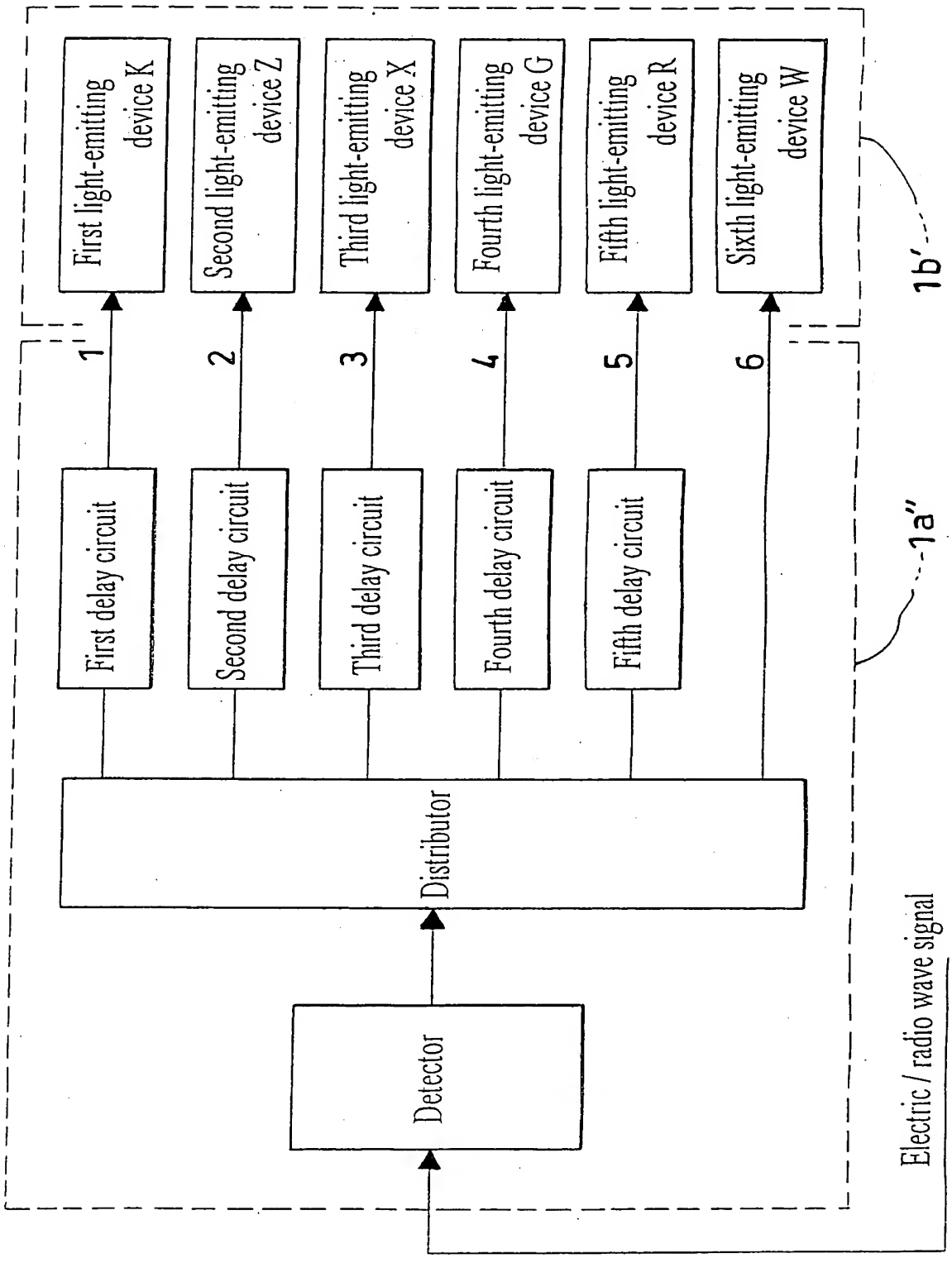
First light-emitting device K
Second light-emitting device Z
Third light-emitting device X
Fourth light-emitting device G
Fifth light-emitting device R
Sixth light-emitting device W
1b'
1
2
3
4
5
6
First delay circuit
Second delay circuit
Third delay circuit
Fourth delay circuit
Fifth delay circuit
1a"
Distributor
Detector
Electric / radio wave signal

FIG. 8

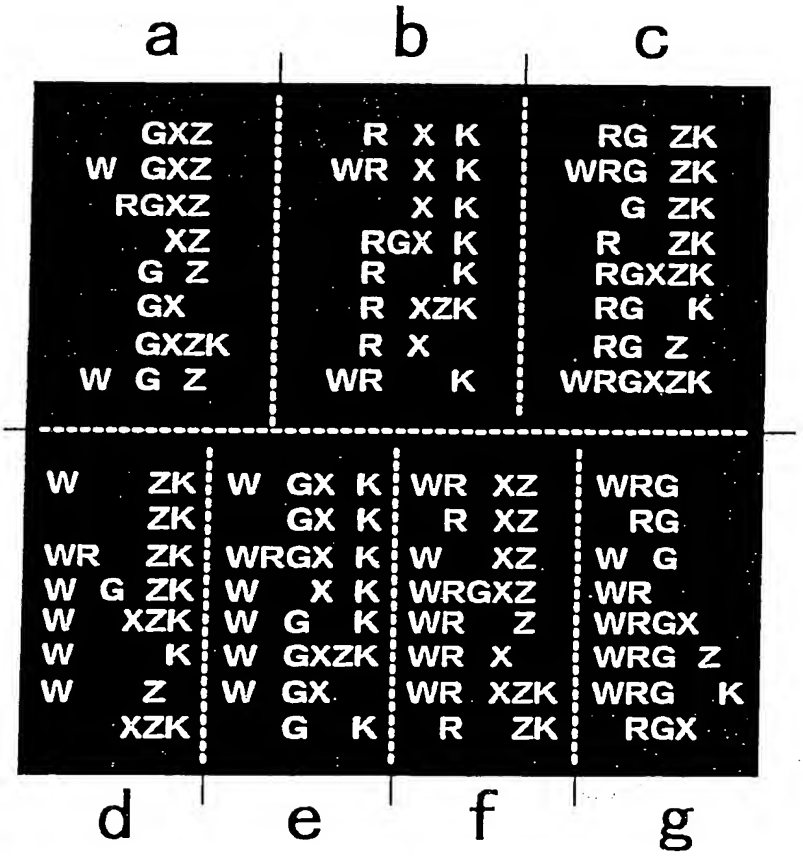
a
b
c
GXZ
W GXZ
RGXZ
XZ
G Z
GX
GXZK
W G Z
R X K
WR X K
X K
RGX K
R K
R XZK
R X
WR K
RG ZK
WRG ZK
G ZK
R ZK
RGXZK
RG K
RG Z
WRGXZK
W ZK
ZK
WR ZK
W G ZK
W XZK
W K
W Z
XZK
W GX K
GX K
WRGX K
W X K
W G K
W GXZK
W GX
G K
WR XZ
R XZ
W XZ
WRGXZ
WR Z
WR X
WR XZK
R ZK
WRG
RG
W G
WR
WRGX
WRG Z
WRG K
RGX
d
e
f
g

FIG. 9

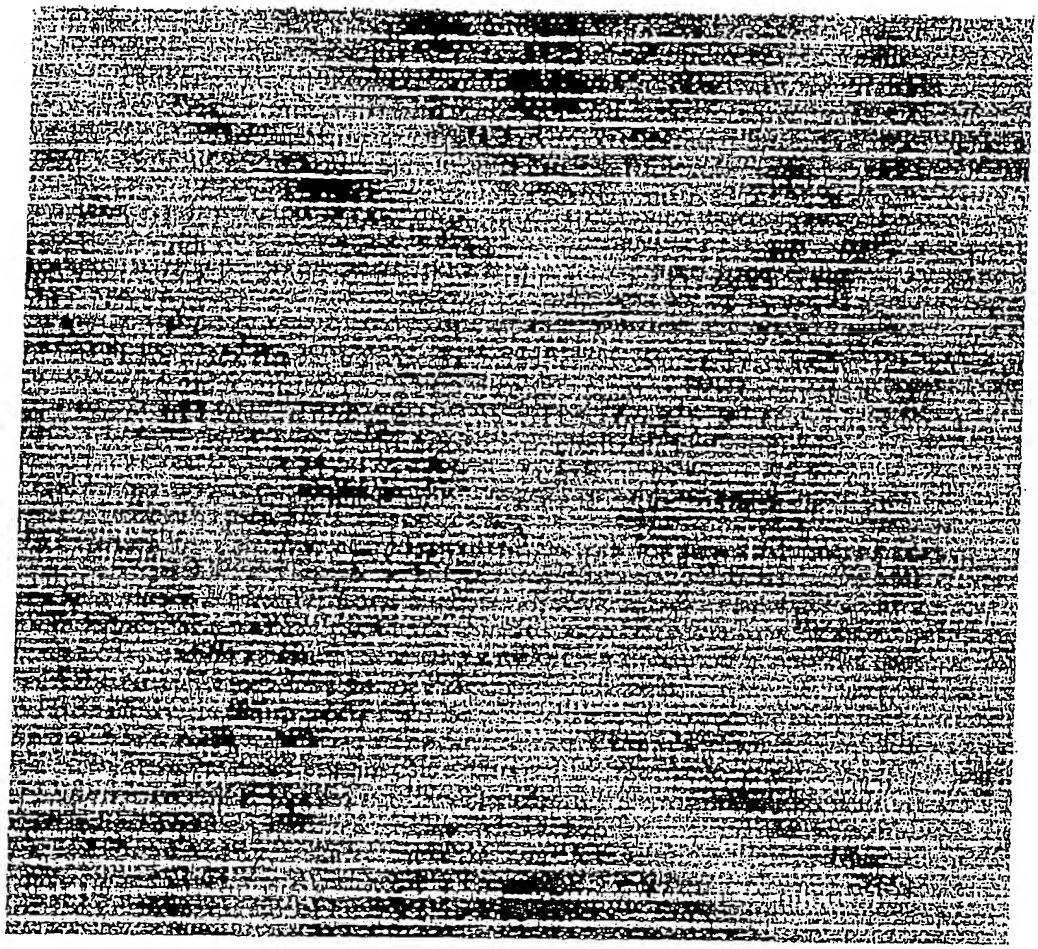

FIG. 10

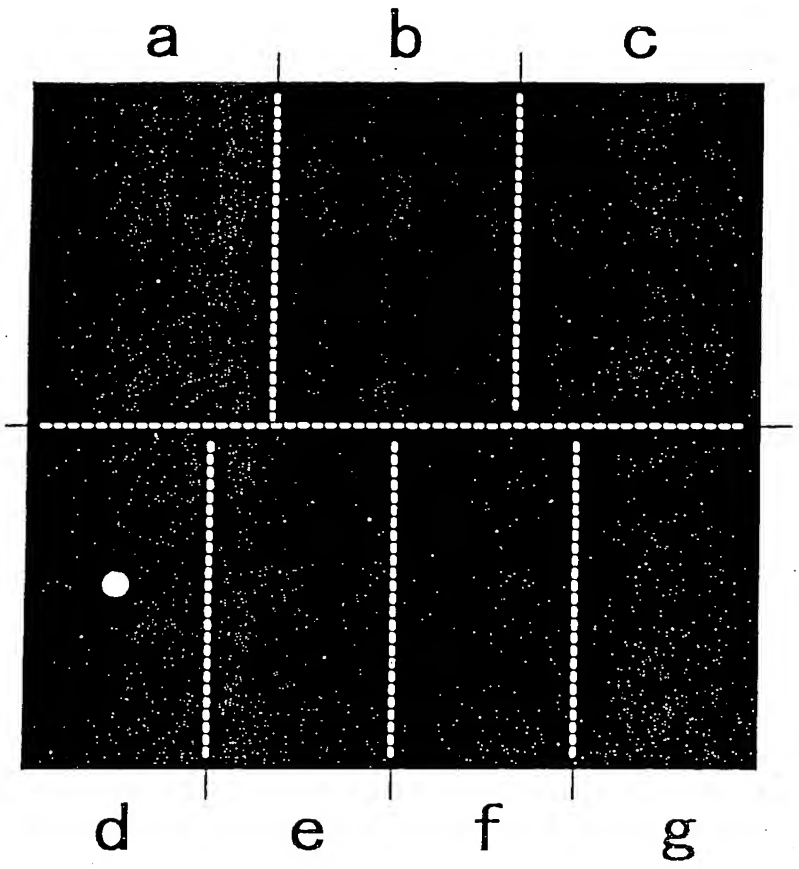

FIG. 11

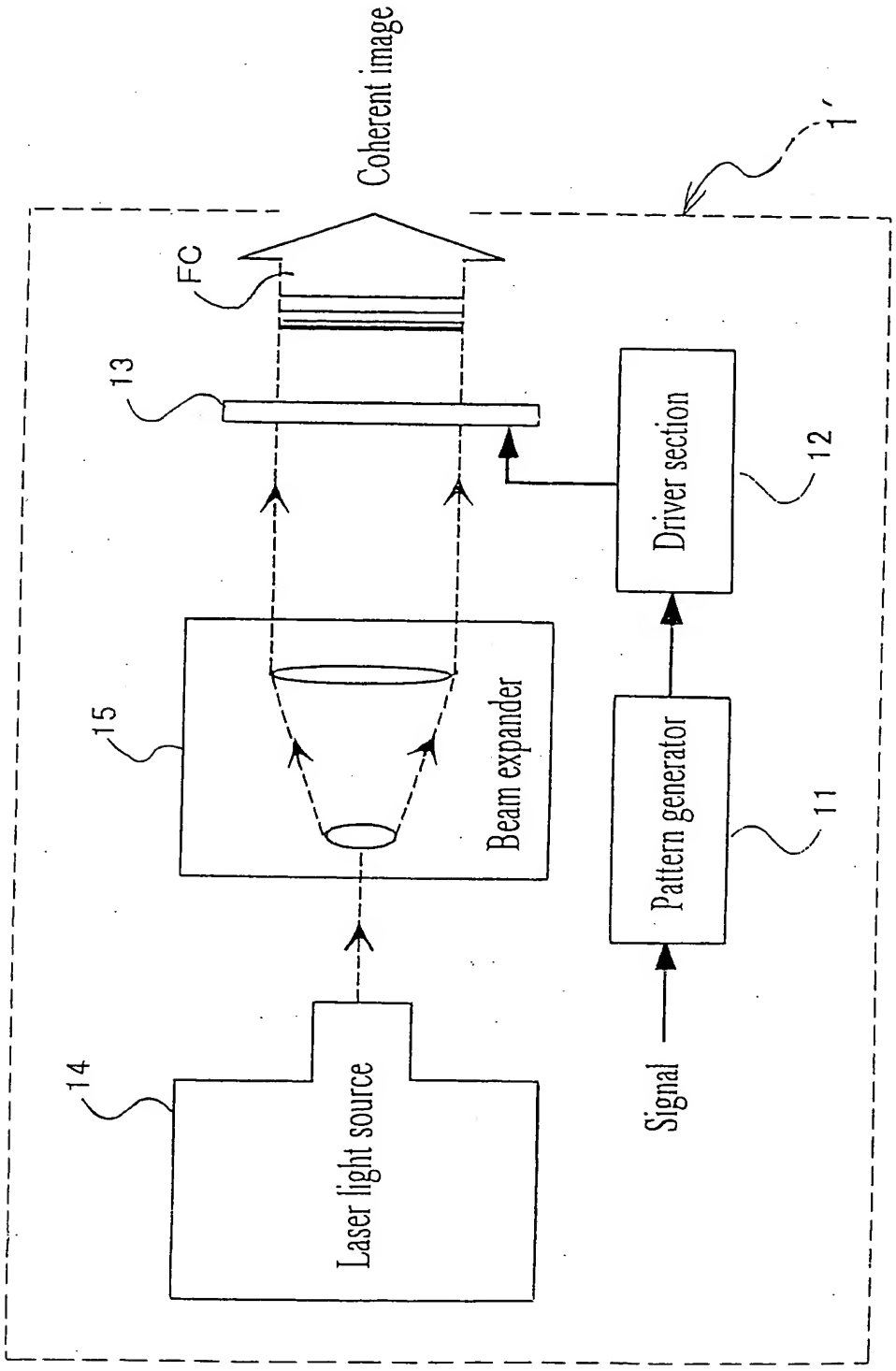
Coherent image
1'
FC
13
Driver section
12
Beam expander
15
Pattern generator
11
Laser light source
14
Signal

FIG. 12

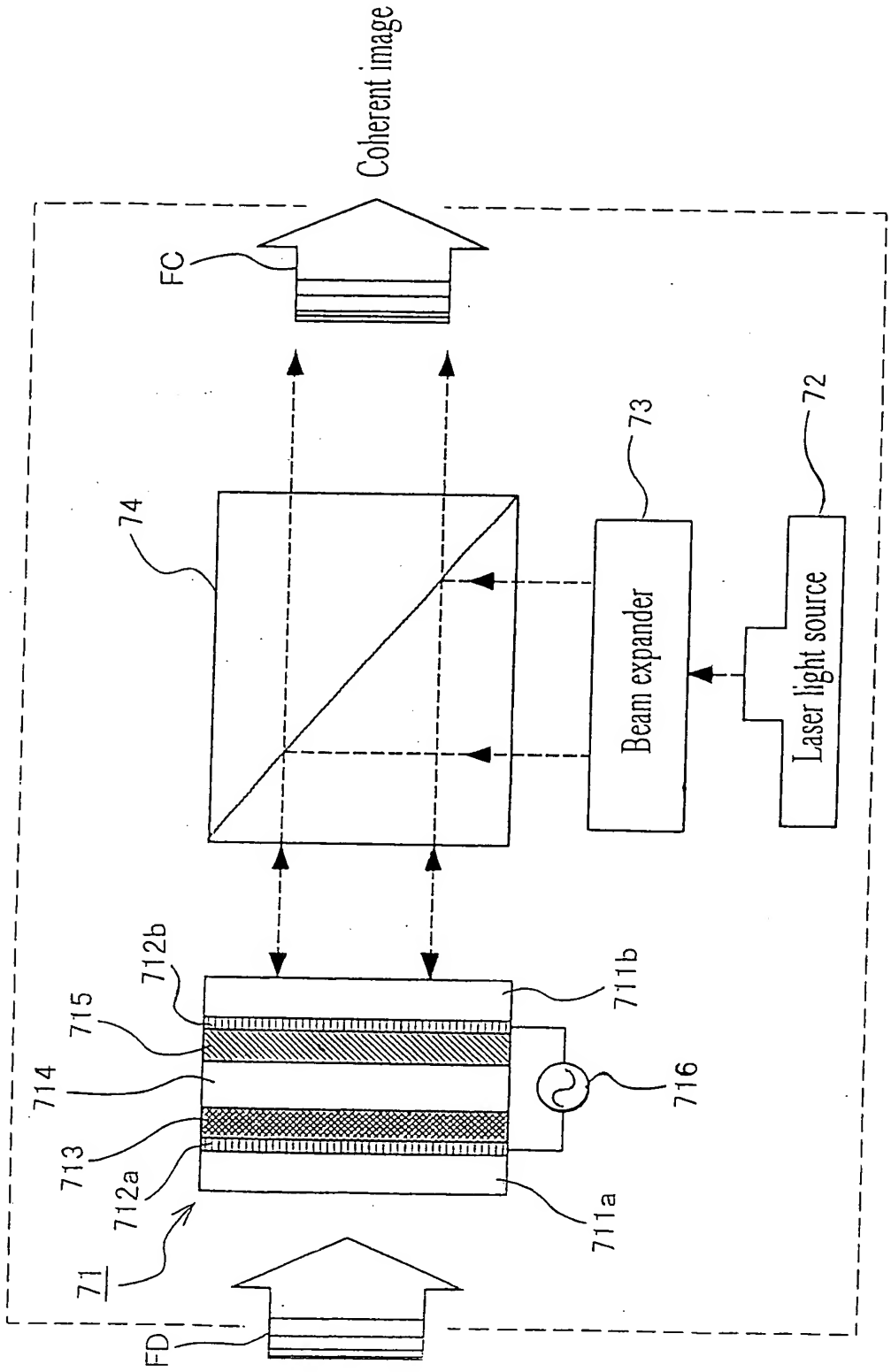
Coherent image
FC
73
72
74
Beam expander
Laser light source
712b
711b
715
714
716
713
712a
711a
71
FD

FIG. 13(a)

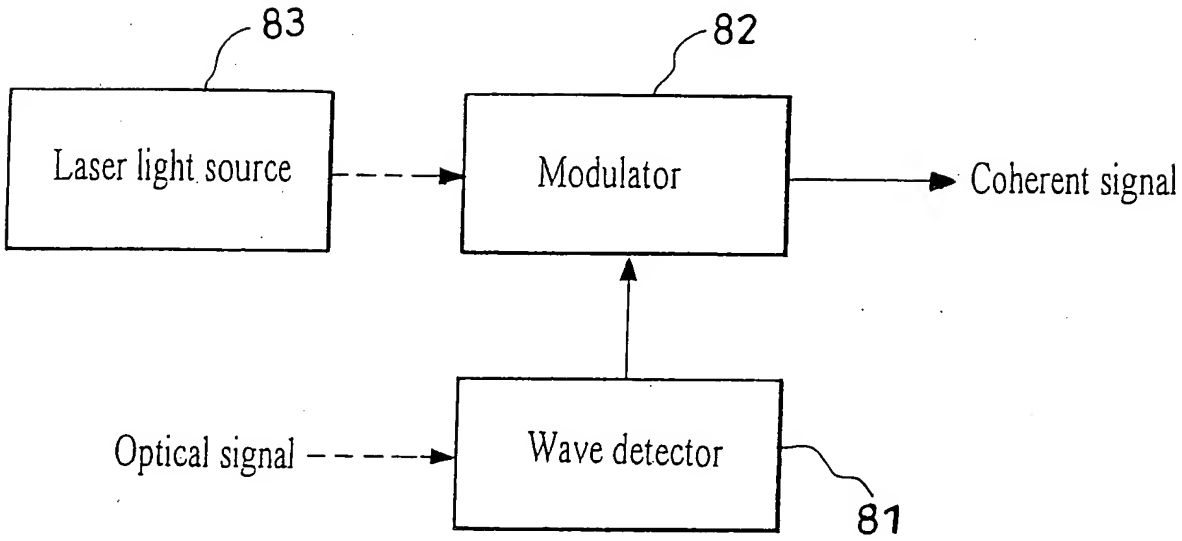

FIG. 13(b)

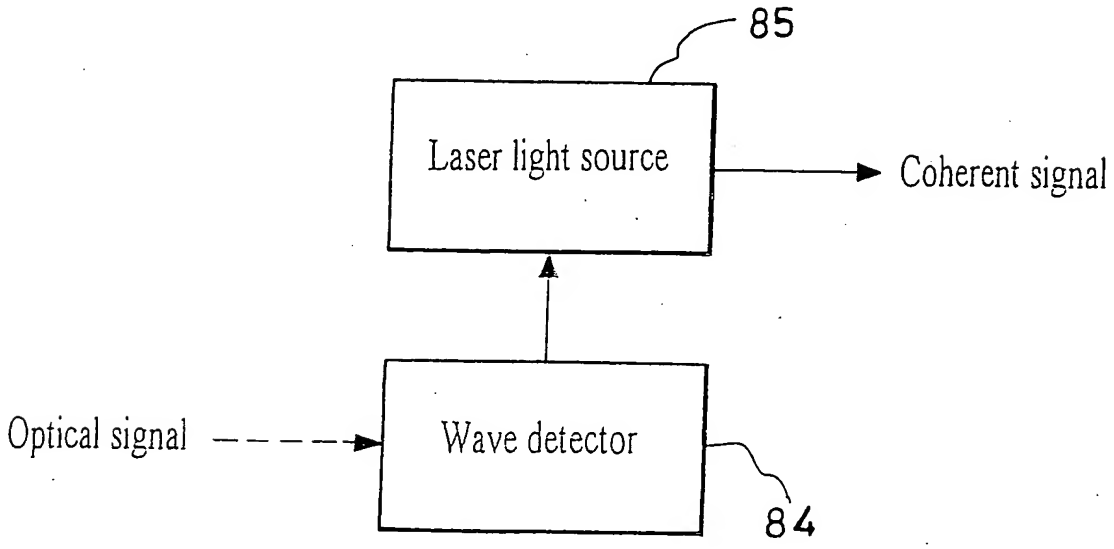
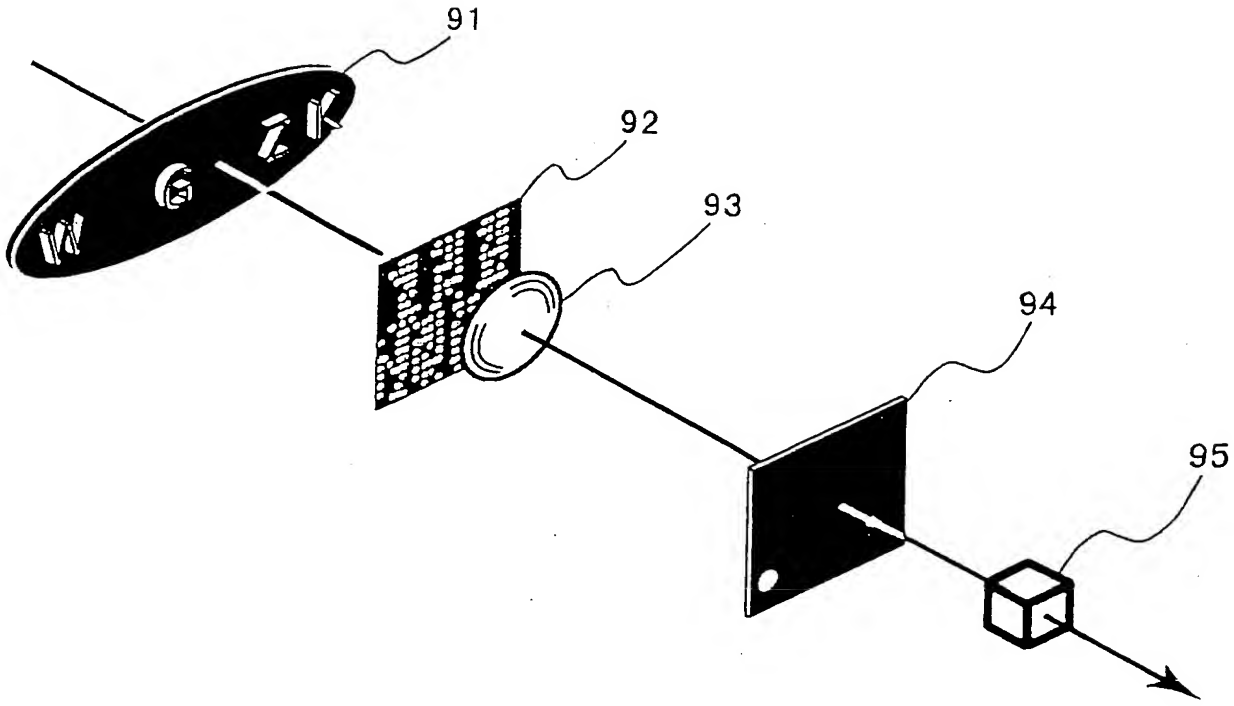
FIG. 14